Coronary Artery Dissection. Follow-up by MDCT

Currently available multidetector computed tomography (MDCT) scanners sometimes allow assessment of coronary stents, particularly those larger than 3 mm in size implanted in the proximal segments of the coronary arteries. We present the case of an 81-year-old patient who was admitted to perform coronary angiography for progressive angina. During catheterization of the left coronary ostium, a dissection of the common trunk and left anterior descending artery occurred (Figure, A), which was complicated by cardiorespiratory arrest requiring intra-aortic balloon counterpulsation and mechanical ventilation. Two stents were implanted to completely cover the dissection, with restoration of TIMI 3 flow; 24 hours later ventilatory support was discontinued. The maximum CK/CK-MB peak was 1905/86 U/L. The patient remained asymptomatic, and following stabilization 2 days later, a follow-up 64-detector MDCT was carried out. The images showed patency of the stents (Figures, B and C), and additionally demonstrated progression of the dissection to the medial segment of the circumflex artery and a feature consistent with a thrombus, probably located in the false lumen (Figure, D). Based on these findings, a new coronary angiography with possible surgical revascularization was planned, but 12 hours after the MDCT examination, the patient experienced an episode of chest pain with ST-segment elevation from V1 to V5, complicated by electromechanical dissociation, and culminating in death. A post-mortem study was not performed.

This case illustrates the usefulness of MDCT for follow-up of coronary stents located in proximal segments, and for identifying specific complications: extension of a dissection and even visualization of a coronary thrombus.

Jordi Estornell, a Juan V. Vilar, b and Francisco Ridocci-Soriano c
 aUnidad de Imagen Cardiaca, ERESA, Consorcio Hospital General Universitario de Valencia, Valencia, Spain.
 bServicio de Cardiología, Consorcio, Hospital General Universitario de Valencia, Valencia, Spain.
 cDepartamento de Medicina, Universidad de Valencia, Valencia, Spain.